

[0029] A method, apparatus and computer program product are provided in accordance with an example embodiment of the present invention in order to control the manner in which audio signals generated by one or more audio sources are output from one or more of the speakers of a computing device. In this regard, the method, apparatus and computer program product of an example embodiment may preferentially direct the audio signals generated by an audio source to one or more of a plurality of speakers based upon the location of the representation of the audio source relative to the display and also based upon the respective positions of the speakers relative to the display. By way of example, the audio signals generated by an audio source that is positioned within content that is displayed upon the display along the left-hand side of the display may be preferentially output by the speakers proximate the left-hand side of the display, while the audio signals generated by an audio source having a representation within the content presented upon the display along the right-hand side of the display may be preferentially output by the speakers proximate the right-hand side of the display of the computing device. Thus, the manner in which the audio signals are output by the computing device may provide additional context to the user and may enhance the user experience.

[0030] The method, apparatus and computer program product may be embodied by or otherwise associated with a wide variety of computing devices. For example, the method, apparatus and computer program product of an example embodiment may be embodied by or otherwise associated with various mobile computing devices including, for example, a portable digital assistant (PDA), mobile telephone, smartphone, pager, mobile television, gaming device, laptop computer, camera, tablet computer, touch surface, video recorder, audio/video player, radio, electronic book, positioning device (e.g., global positioning system (GPS) device), or any combination of the aforementioned, and other types of voice and text communications systems. Alternatively, the method, apparatus and computer program product of an example embodiment may be embodied by or otherwise associated with a fixed or other non-mobile computing device, such as a desktop computer, a personal computer, a workstation or the like.

[0031] Regardless of the type of computing device, the computing device may include or otherwise be associated with an apparatus **10**, such as that shown in FIG. 1, that is specifically configured in accordance with an example embodiment of the present invention to control the audio output. The apparatus may include or otherwise be in communication with a processor **12**, a memory device **14**, an optional communication interface **16** and a user interface **18**. In some embodiments, the processor (and/or co-processors or any other processing circuitry assisting or otherwise associated with the processor) may be in communication with the memory device via a bus for passing information among components of the apparatus. The memory device may be non-transitory and may include, for example, one or more volatile and/or non-volatile memories.

[0032] In other words, for example, the memory device may be an electronic storage device (e.g., a computer readable storage medium) comprising gates configured to store data (e.g., bits) that may be retrievable by a machine (e.g., a computing device like the processor). The memory device may be configured to store information, data, content, applications, instructions, or the like for enabling the apparatus to

carry out various functions in accordance with an example embodiment of the present invention. For example, the memory device could be configured to buffer input data for processing by the processor. Additionally or alternatively, the memory device could be configured to store instructions for execution by the processor.

[0033] As noted above, the apparatus **10** may be embodied by a computing device, such as a tablet computer. However, in some embodiments, the apparatus may be embodied as a chip or chip set. In other words, the apparatus may comprise one or more physical packages (e.g., chips) including materials, components and/or wires on a structural assembly (e.g., a baseboard). The structural assembly may provide physical strength, conservation of size, and/or limitation of electrical interaction for component circuitry included thereon. The apparatus may therefore, in some cases, be configured to implement an embodiment of the present invention on a single chip or as a single "system on a chip." As such, in some cases, a chip or chipset may constitute means for performing one or more operations for providing the functionalities described herein.

[0034] The processor **12** may be embodied in a number of different ways. For example, the processor may be embodied as one or more of various hardware processing means such as a coprocessor, a microprocessor, a controller, a digital signal processor (DSP), a processing element with or without an accompanying DSP, or various other processing circuitry including integrated circuits such as, for example, an ASIC (application specific integrated circuit), an FPGA (field programmable gate array), a microcontroller unit (MCU), a hardware accelerator, a special-purpose computer chip, or the like. As such, in some embodiments, the processor may include one or more processing cores configured to perform independently. A multi-core processor may enable multiprocessing within a single physical package. Additionally or alternatively, the processor may include one or more processors configured in tandem via the bus to enable independent execution of instructions, pipelining and/or multithreading.

[0035] In an example embodiment, the processor **12** may be configured to execute instructions stored in the memory device **14** or otherwise accessible to the processor. Alternatively or additionally, the processor may be configured to execute hard coded functionality. As such, whether configured by hardware or software methods, or by a combination thereof, the processor may represent an entity (e.g., physically embodied in circuitry) capable of performing operations according to an embodiment of the present invention while configured accordingly. Thus, for example, when the processor is embodied as an ASIC, FPGA or the like, the processor may be specifically configured hardware for conducting the operations described herein. Alternatively, as another example, when the processor is embodied as an executor of software instructions, the instructions may specifically configure the processor to perform the algorithms and/or operations described herein when the instructions are executed. However, in some cases, the processor may be a processor of a specific device (e.g., a mobile terminal or a fixed computing device) configured to employ an embodiment of the present invention by further configuration of the processor by instructions for performing the algorithms and/or operations described herein. The processor may include, among other things, a clock, an arithmetic logic unit (ALU) and logic gates configured to support operation of the processor.